## **CLAIMS**

- 1. A method for diagnosing leukemia, pre-leukemia or aleukemic malignant blood diseases wherein stem cell growth factor (SCGF) in an in-vivo sample is quantified.
- 2. A method for discriminating leukemia from pre-leukemia or aleukemic malignant blood diseases wherein stem cell growth factor (SCGF) in an in-vivo sample is quantified.
- 3. A method for discriminating aplastic anemia from myelodysplastic syndrome wherein stem cell growth factor (SCGF) in an in-vivo sample is quantified.
- 4. A method for diagnosing the engraftment state of the hematopoietic stem cells after transplantation of the hematopoietic stem cells wherein stem cell growth factor (SCGF) in an in-vivo sample is quantified.
- 5. A method for diagnosing graft versus host disease (GVHD) wherein stem cell growth factor (SCGF) in an in-vivo sample is quantified.
- 6. The method according to any one of claims 1 to 5 wherein a method for diagnosing or discriminating is an immunological assay.
- 7. The method according to claim 6, wherein the immunological assay is a sandwich assay.

- 8. The method according to claim 7, wherein two kinds of antibodies reacting with different epitopes of stem cell growth factor (SCGF) are used in the sandwich assay.
- 9. The method according to claim 8, wherein the antibodies are selected from polyclonal and monoclonal antibodies.
- 10. The method according to claim 9, wherein the monoclonal antibodies are selected from the group consisting of a monoclonal antibody recognizing the region shown by the amino acid sequence of 6-28 amino acids, a monoclonal antibody recognizing the region shown by the amino acid sequence of 29-59 amino acids, and a monoclonal antibody recognizing the region shown by the amino acid sequence of 60-302 amino acids, all in the amino acid sequence of SEQ. ID No. 1.
- 11. A diagnostic agent for leukemia, pre-leukemia or aleukemic malignant blood diseases comprising an antibody reacting with stem cell growth factor (SCGF) as an active ingredient.
- 12. A diagnostic agent for the engraftment state of the hematopoietic stem cells after transplantation of the hematopoietic stem cells comprising an antibody reacting with stem cell growth factor (SCGF) as an active ingredient.
- 13. A diagnostic agent for graft versus host disease (GVHD) comprising an antibody reacting with stem cell growth factor (SCGF) as an active ingredient.
- 14. The diagnostic agent according to any one of claims 11 to

- 13, wherein the antibody is selected from polyclonal and monoclonal antibodies.
- 15. The diagnostic agent according to claim 14, wherein the monoclonal antibody is selected from the group consisting of a monoclonal antibody recognizing the region shown by the amino acid sequence of 6-28 amino acids, a monoclonal antibody recognizing the region shown by the amino acid sequence of 29-59 amino acids, and a monoclonal antibody recognizing the region shown by the amino acid sequence of 60-302 amino acids, all in the amino acid sequence of SEQ. ID No. 1.
- 16. A diagnostic kit containing an antibody reacting with stem cell growth factor (SCGF), which is for leukemia, pre-leukemia or aleukemic malignant blood diseases, for engraftment state of the hematopoietic stem cells after transplantation of the hematopoietic stem cells, and for graft versus host disease (GVHD).
- 17. The diagnostic kit according to claim 16, which contains stem cell growth factor (SCGF).
- 18. A monoclonal antibody which recognizes the region shown by the amino acid sequence of 29-59 amino acids in SEO. ID No. 1.
- 19. A monoclonal antibody which recognizes the region shown by the amino acid sequence shown by 60-302 amino acids in SEQ. ID No. 1.
- 20. A hybridoma which produces the monoclonal antibody according

to claim 18 or 19.